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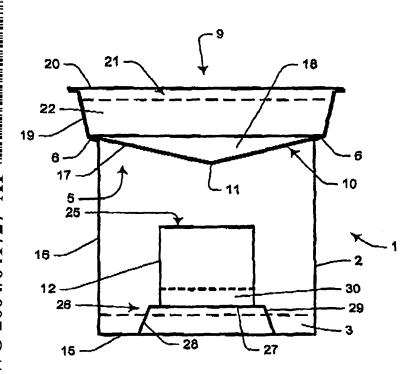
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[Continued on next page]

(54) Title: A DISTILLATION UNIT AND A METHOD OF DISTILLATION



(57) Abstract: A distillation unit (1) includes a container in the form of a generally cylindrical steel pot (2) for receiving a first liquid (3). The liquid is evaporated following application of heat from a heat source (4) to form a liquid vapour. Pot (2) has an upwardly facing generally circular opening (5) defined by a peripheral edge in the form of a continuous annular lip (6). A heat exchanger in the form of a generally circular stainless steel dish (9) engages substantially all of lip (6) and extends across substantially all of opening (5). Dish (9) has a downwardly facing substantially frusto-conical condensation surface (10) both for condensing the liquid vapour that contacts surface (10) and for directing the condensate inwardly from lip (6) to a central collection zone (11) that is a substantially planar and horizontal surface. A collector in the form of a metal drinking cup (12) is disposed within pot (2) for receiving the condensate.





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International application No. PCT/AU03/01480

CLASSIFICATION OF SUBJECT MATTER Int. Cl. 7: C02F 1/04, B01D 3/02, 5/00 According to International Patent Classification (IPC) or to both national classification and IPC В. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC (7): C02F 1/04, 1/18, B01D 1/06, 1/08, 3/02, 5/00 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) **DWPI** C. DOCUMENTS CONSIDERED TO BE RELEVANT Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Derwent Abstract Accession No. 98-550181/47, Class D15, J04 X JP 10-244250 A (MITO RIKA GLASS KK), 14 September 1998 1-20 Derwent Abstract Accession No. 98-460871/40, Class D15 X JP 10-192839 A (TSUTSUMI), 28 July 1998 1 - 20FR 2742740 A (PLAZA DESIGN CONSULTANT CO LTD), 27 June 1997 X Whole document 1-20 X Further documents are listed in the continuation of Box C See patent family annex Special categories of cited documents: "A" document defining the general state of the art later document published after the international filing date or priority date which is not considered to be of particular and not in conflict with the application but cited to understand the principle relevance or theory underlying the invention earlier application or patent but published on or "E" document of particular relevance; the claimed invention cannot be after the international filing date considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority document of particular relevance; the claimed invention cannot be claim(s) or which is cited to establish the considered to involve an inventive step when the document is combined publication date of another citation or other special with one or more other such documents, such combination being obvious to reason (as specified) a person skilled in the art document referring to an oral disclosure, use, 118e11 document member of the same patent family exhibition or other means document published prior to the international filing date but later than the priority date claimed Date of mailing of the international search report 0 9 1 2003 Date of the actual completion of the international search 4 December 2003 Name and mailing address of the ISA/AU Authorized officer **AUSTRALIAN PATENT OFFICE** PO BOX 200, WODEN ACT 2606, AUSTRALIA ADRIAN GILLMORE E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929 Telephone No: (02) 6283 2125



International application No.
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	PCT/AU03/01480						
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT							
Category* Cita	Citation of document, with indication, where appropriate, of the relevant passages						
DE	3535279 A (ZIEGLER), 9 April 1987						
X Wh	Whole document						
wo	200003779 A (SOLAR SOLUTIONS LLC), 27 January 2000						
X Wh	ole document	1-20					
DE	4023965 A (CREMER), 27 September 1990						
X Wh	ole document	1-20					
X DE	20301711 U1 (WINDSCHIEGEL MASCHBAU), 26 June 2003 ole document						
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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
JР	10244250						
JР	10192839					· · · · · · · · · · · · · · · · · · ·	
FR	2742740	JР	9168776				
DE	3535279						
wo	0003779	AU	53142/99	BR	9912115	EG	22043
DE	4023965						
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